

American Electric Power Summer 2002 Preparedness

**Presentation to the
Indiana Utility Regulatory Commission**

May 13, 2002



AEP Presenters

- **John Sampson**
 - ▣ *Indiana State President*
- **Karl Boyd**
 - ▣ *Distribution Region Vice President*
- **John Coffey**
 - ▣ *Manager of Michiana Area Distribution Systems*
- **Dave Switzer**
 - ▣ *Michiana Area Community Services Manager*

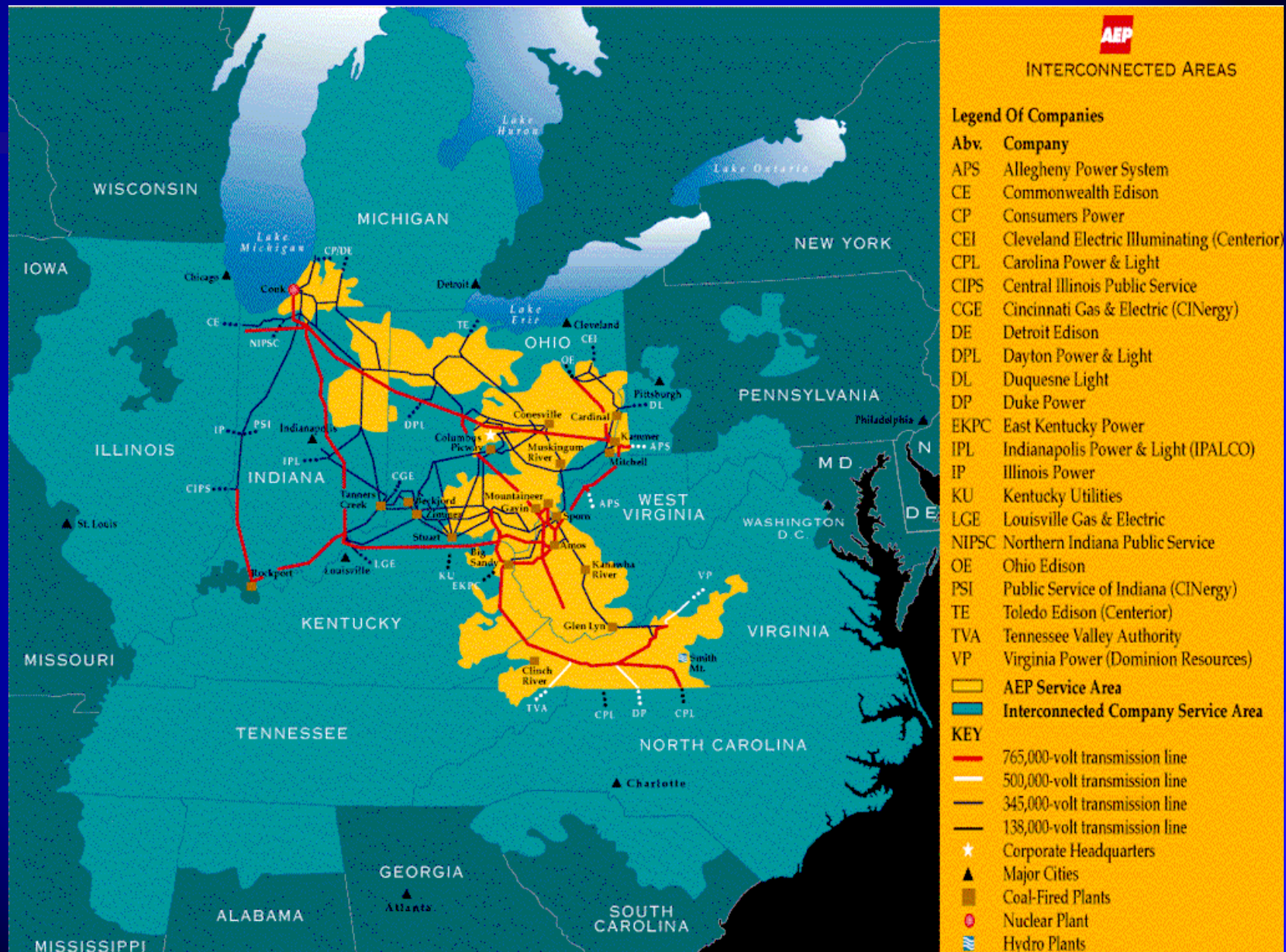
Regulated AEP-East System Generation Reserves

	<i>Interruptible Load</i>	
	ON	OFF
Projected Total Demand	10,858 MW	10,764 MW
Net Total Resources	12,390 MW	12,390 MW
Net Reserve Margin	14.1%	15.1%

Emergency Operating Plan

- Purchase from neighbor utilities
- Interruptible loads
- Extra load capability of generating units
- Curtailing non-essential power consumption
- Reducing system voltage
- Appeals for voluntary reductions

Eastern AEP Transmission System



South Bend Network Overview

Late 2000 – First quarter 2001

- Electrical failures – reliability issues identified.
- Made a commitment to the community to fix the problem.
- Initiated and publicly explained an interim safety plan.



South Bend Network Overview

- ***Short term*** (first/second quarter 2001)
 - Communication: mayor, business leaders, building occupants and local media outlets
 - Equipment upgrades – \$1.2 mil
 - Safety Plan
- ***Long term***
 - Replacement of 34.5 kV system
 - Projected expenditures - \$18 mil
 - Regular communication and meetings with local leadership and public

South Bend Network Overview

Project timeline – 2 years

- Completed first phase November 2001
- Second phase currently in progress
 - Approximately 70% complete
 - Completion projected: October 2002
- Regular communication
 - Meetings with business leaders and occupants
 - Door-to-door regular interface with affected customers
 - Regular updates to mayor, occupants and local media outlets

October 2001 Tornado Activity



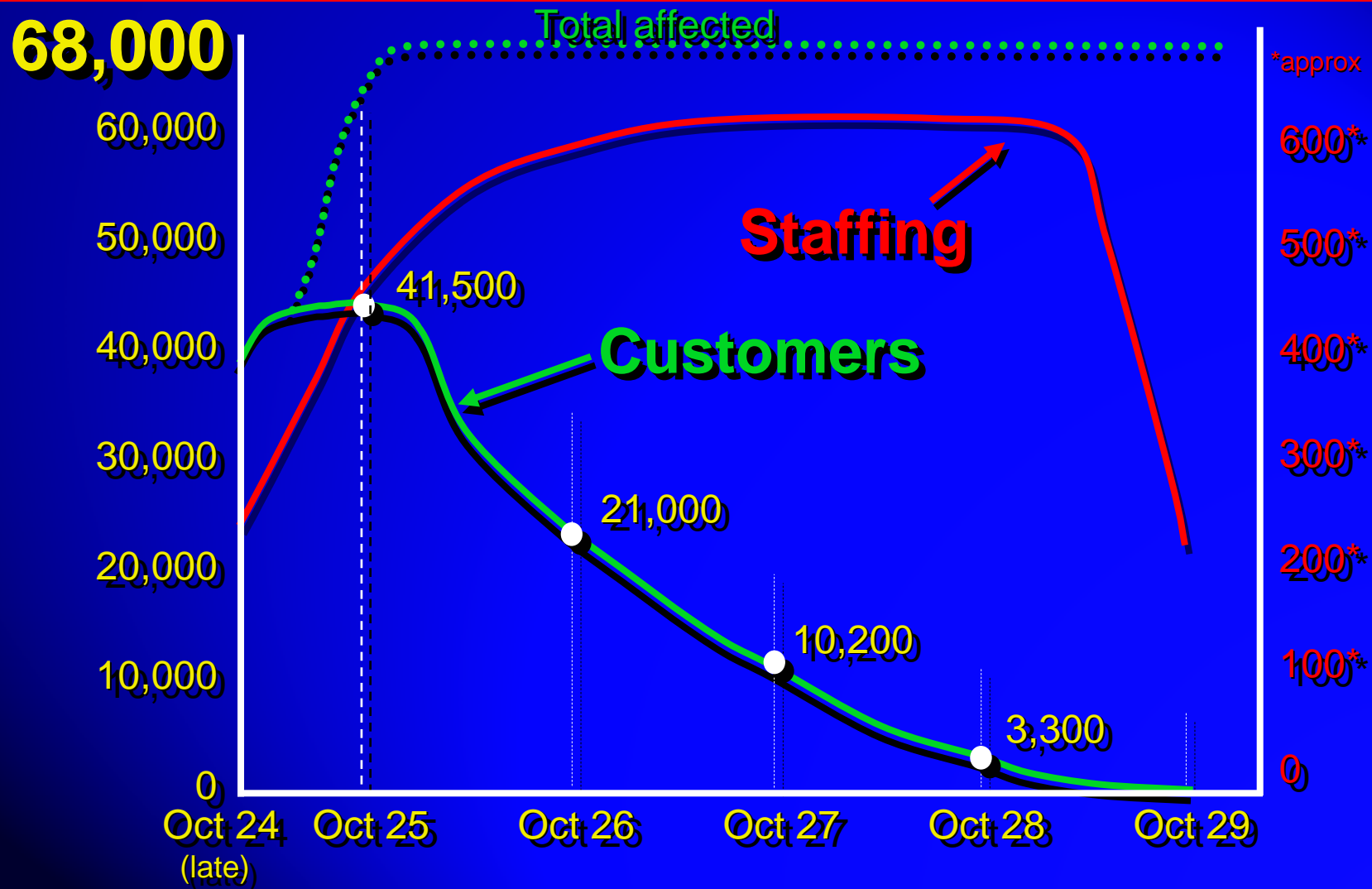
Northwest Indiana
hardest hit area

RED denotes area
of greatest damage

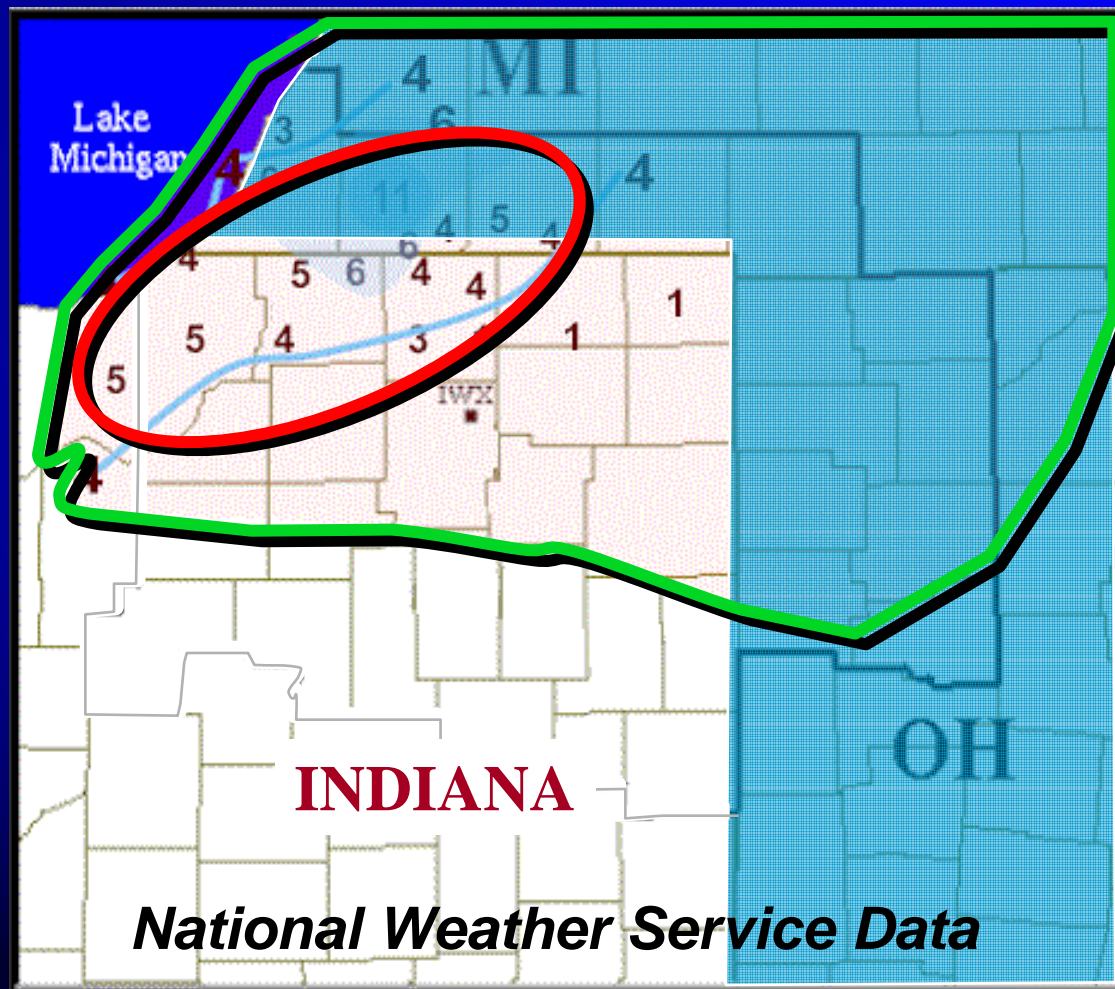
Total of six
tornadoes in
AEP Territory



Michiana Tornado Customer Outage Effect



January 2002 Ice Storm



GREEN denotes area of ice accumulation

RED denotes hardest hit area (ice and snow) – again northwestern Indiana

Numbers represent amount of snowfall

Michiana Ice Storm Customer Outage Effect



Storm Review

Strengths and Opportunities

Strengths

- *Large organization*
 - Quick access to significant resources
- *Storm management*
 - Pre-storm readiness
 - Centralized analysis
 - Reconnaissance
 - Decentralized field restoration
- *Communication links with public*
 - Proactive communications with media, call centers, local leaders
 - Multiple updates for the duration of the event
 - Clear exchange of information

Storm Review

Strengths and Opportunities

Opportunities for Improvement

- *Communication Issues*
 - Solution center / customer-by-customer interface
 - Field report interface
- *Circuit Reliability Issues*
 - Identify and eliminate outage causes
 - Minimize number of customers affected by any single cause
 - Tree trimming
 - Sectionalizing

More Aggressive Tree Trimming

- Past industry accepted practices had worked well
 - ❑ Reviewed lines each year, cut for three-year growth on trees encroaching lines
 - ❑ Did not “clear to sky”
 - ❑ Resulted in much tighter right-of-way, better aesthetics
- Balance between tree aesthetics and reliability in Michiana shifted as a result of the storms.
- Clearing much wider right of way, remove overhang
- Targeting specific areas by history and customer complaints
- Communicating up front
 - ❑ Local media, mayor, key leaders
 - ❑ Community meetings



Change in Sectionalizing Philosophy

- Breaking circuit “sections” down into smaller groups of customers
 - Minimize number of customers affected by any single cause
 - Reduces amount of time to find and isolate problems
- Involves more equipment to maintain, but will result in fewer customers impacted per a single cause.
- Communicating publicly through local media
 - Both the issues and solutions
- Targeting specific areas per history and customer complaints

Overall Reliability Approach

- Focus mitigation activities on doing the “right work” in the “right place”
 - Focus specific types of mitigation efforts on the areas where the most benefits can be gained
 - Reduce number of customers outaged per cause
 - Streamlined processes and empowered line mechanics to make decisions where appropriate

Overall Reliability Approach

Focus resources on mitigation of worst performing circuits

- The 10% worst performing circuits generate:
 - ▣ 18% of total outages
 - ▣ 33% of total customer interruptions
- The 20% worst performing circuits generate:
 - ▣ 32% of total outages
 - ▣ 53% of total customer interruptions
- Analyze and focus specifically on areas needing additional improvement
- Commitment to continue providing additional resources to the Michiana area



Overall Reliability Approach

- Ongoing system improvements to reduce frequency and duration of outages
 - ❑ Pole Inspections - In excess of 42,000
 - ❑ Pole Replacements - Approximately 700
 - ❑ Pole Reinforcements – Approximately 625
 - ❑ Lightning Mitigation (Arrestor Installation) – Approximately 3,200
 - ❑ Circuit Inspections – Over 3,500 line miles
 - ❑ Animal Mitigation – Approximately 2,200 units installed
 - ❑ Recloser Replacements – Approximately 600

Communication

- Active public communication avenues
 - Media, Community and Customer Services.
 - Solution center agents.
 - Distribution coordinators and specialists.
 - Call backs (during storm recoveries)
- Pro-active crisis communication efforts
 - Goal: openly and frequently communicate; answer before asked.
 - Community meetings and local business owner/manager visits.
 - Daily interaction with all parties (government, business, community)
Increased during storm recovery
 - Editorial board visits.
 - Printed materials, including progression maps.
 - Daily detailed e-mail of progress.

Communication

- Methods – pro-active approach in Michiana
 - Dedicated meetings / presentations to local groups.
 - Phone calls.
 - Personal visits.
 - Dedicated WEB site.
 - E-mail (often daily: reporting progress, WEB site, maps, etc.)
 - Clubs and organizations.
 - Media (frequent detailed releases, press conferences, site visits)

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Questions

